

REMARKS

In the Office Action, claims 1-52 were pending and claim 1-52 were rejected. In this response, claims 1, 41, and 52 have been amended. Therefore, claims 1-52 are presented for examination.

Summary of the Office Action

Examiner objected to claims 3-4, 9-11, 29-31, and 49-50 due to informalities.

Examiner rejected claims 41-52 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Examiner rejected claims 1-2, 5-7, 12-13, 16, 21, 24, 32, 41-42, and 45-47 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,463,177 to Li et al.

Examiner rejected claims 3-4, 11, and 43-44 under 35 U.S.C. §103(a) as being unpatentable over Li in view of U.S. Patent No. 5,790,878 to Anderson et al.

Examiner rejected claims 8-10, 14, 40, 48-51 under 35 U.S.C. §103(a) as being unpatentable over Li in view of U.S. Patent No. 6,104,430 to Fukuoka.

Examiner rejected claims 15, 18-20, and 52 under 35 U.S.C. §103(a) as being unpatentable over Li in view of U.S. Patent No. 6,020,920 to Anderson.

Examiner rejected claims 17, 29-31, 33-34, and 38-39 under 35 U.S.C. §103(a) as being unpatentable over Li.

Examiner rejected claims 22-23, 25-26, 36-37 under 35 U.S.C. §103(a) as being unpatentable over Li in view of U.S. Patent No. 6,154,493 to Acharya et al.

Claims 1-2, 5-7, 12-13, 16, 21, 24, 32, 41-42 and 45-47 were rejected as being anticipated by U.S. Patent No. 6,463,177 to Li et al. (hereinafter "Li").

Claims 3-4, 11 and 43-44 were rejected as being unpatentable over Li in view of U.S. Patent No. 5,790,878 to Anderson et al. (hereinafter "Anderson").

Claims 8-10, 14, 40 and 48-51 were rejected as being unpatentable over Li in view of U.S. Patent No. 6,104,430 to Fukuoka.

Claims 15, 18-20 and 52 were rejected as being unpatentable over Li in view of U.S. Patent No. 6,020,920 to Anderson.

Claims 17, 29-31, 33-34 and 38-39 were rejected as being unpatentable over Li.

Claims 22-23, 25-26 and 36-37 were rejected as being unpatentable over Li in view of U.S. Patent No. 6,154,493 to Acharya et al.

Response to rejections under 35 U.S.C. §102

Examiner rejected claims 1-2, 5-7, 12-13, 16, 21, 24, 32, 41-42, and 45-47 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,463,177 to Li et al.

Claim 1, as amended, reads as follows:

A method for compressing digital images upon capture at a digital camera device, the method comprising:

receiving user input requesting capture of a sequence of digital images at the digital camera device, said digital images being stored in an image buffer;

applying a relatively-fast compression technique to temporarily compress a subset of the digital images from the sequence of digital images upon capture, so as to increase availability of storage in said image buffer for storing other digital images being captured;

at some point in time after cessation of the user input, decompressing the subset of the digital images that were temporarily compressed; and thereafter

applying a relatively-thorough compression technique to the captured sequence of digital images.

Li states that "to change compression ratios using other techniques" the images have to be "decoded, requantized, and then reencoded." However, Li dismisses this solution as having problems. Li does not teach or suggest temporarily compressing a

subset of the images, then decompressing the subset of the images, and compressing the entire captured sequence of images. Rather, Li dismisses the idea in a single line, stating that "To change compression ratios using other compression techniques, the stored images would first have to be decoded, then requantized and then reencoded at the higher compression ratio." Thus, Li clearly discusses having to decode "the stored images" which include all of the images, requantizing the images, and same set of images. Li therefore does not teach or suggest compressing only a subset of the images to increase availability of storage sufficiently. Therefore, claim 1, as amended, is not anticipated by Li.

Claim 41, as amended, recites

A digital camera device with improved latency time between acquiring pictures, the device comprising:
an image buffer to store digital images;
a user-activated button, integrated into the digital camera device, for generating a user request to capture a sequence of digital images at the digital camera device, said sequence of digital images being stored in the image buffer upon capture;
a first compression module, embodied within the digital camera device, for temporarily compressing at least some of the digital images from the sequence of digital images upon capture, thereby freeing up available storage in said image buffer;
a buffer to store a temporarily compressed image;
a decompression module, embodied within the digital camera device, for decompressing the digital images that were temporarily compressed at some point in time after activation of said user-activated button; and
a second compression module, embodied within the digital camera device, for compressing said sequence of digital images more thoroughly than that provided by said first compression module, prior to storing the image in a non-volatile memory.

Li does not teach or suggest temporarily compressed images being stored in a buffer, and providing a more thorough compression of the images prior to storing them in non-volatile memory. Li has a single sentence about compression and

recompression, and does not address such aspects. Thus, claim 41 and its dependent claims are patentable over Li.

Response to rejections under 35 U.S.C. §103(a)

Examiner rejected claims 3-4, 11, and 43-44 under 35 U.S.C. §103(a) as being unpatentable over Li in view of U.S. Patent No. 5,790,878 to Anderson et al.

Anderson discloses “a system and method for recovering from a power failure in a digital camera comprises a power manager for detecting power failures, an interrupt handler for responsively incrementing a counter device, service routines which register to receive notification of the power failure, and a processor for evaluating the counter and providing notification of the power failure to the service routines which then assist the digital camera to recover from the power failure.” (Anderson, Abstract.) Anderson fails to disclose or suggest the limitations of claim 1 or the limitations of claim 41 discussed above, whether considered separately or in combination with Li. Claims 3, 4, and 11 include the limitations of claim 1 by virtue of being dependent on claim 1. Claims 43-44 include the limitations of claim 41 by virtue of being dependent on claim 41. Therefore, claims 3-4, 11, and 43-44 are patentable over the combination of Li and Anderson for at least the reasons articulated with respect to claims 1 and 41.

Examiner rejected claims 8-10, 14, 40, and 48-51 under 35 U.S.C. §103(a) as being unpatentable over Li in view of U.S. Patent No. 6,104,430 to Fukuoka.

Fukuoka discloses “a digital electronic camera which can accept various types of input/output cards or memory cards.” (Fukuoka, Abstract.) Fukuoka fails to disclose or suggest the limitations of claim 1 or the limitations of claim 41 discussed above, whether considered separately or in combination with Li. Claims 8-10, 14, and 40 include the

limitations of claim 1 by virtue of being dependent on claim 1. Claims 48-51 include the limitations of claim 41 by virtue of being dependent on claim 41. Therefore, claims 8-10, 14, 40, and 48-51 are patentable over the combination of Li and Fukuoka for at least the reasons articulated with respect to claims 1 and 41.

Examiner rejected claims 15, 18-20, and 52 under 35 U.S.C. §103(a) as being unpatentable over Li in view of U.S. Patent No. 6,020,920 to Anderson (Anderson II).

Anderson II discloses “a method and system is disclosed for accelerating a user interface on a display of an image capture unit.” (Anderson II, Abstract.) Anderson II fails to disclose or suggest the limitations of claim 1 or the limitations of claim 41 discussed above, whether considered separately or in combination with Li. Claims 15 and 18-20 include the limitations of claim 1 by virtue of being dependent on claim 1. Claim 52 includes the limitations of claim 41 by virtue of being dependent on claim 41. Therefore, claims 15, 18-20, and 52 are patentable over the combination of Li and Anderson II for at least the reasons articulated with respect to claims 1 and 41.

Examiner rejected claims 22-23, 25-26, and 36-37 under 35 U.S.C. §103(a) as being unpatentable over Li in view of U.S. Patent No. 6,154,493 to Acharya et al.

Acharya discloses “a method that includes splitting raw image data into a plurality of channels including color plane difference channels, and then compressing separately each of these channels using a two-dimensional discrete wavelet transform.” (Acharya, Abstract.) Acharya fails to disclose or suggest the limitations of claim 1 whether considered separately or in combination with Li. Claims 22-23, 25-26, and 36-37 include the limitations of claim 1 by virtue of being dependent on claim 1. Therefore,

claims 22-23, 25-26, and 36-37 are patentable over the combination of Li and Acharya for at least the reasons articulated with respect to claim 1.

Conclusion


Applicant respectfully submits that in view of the amendments and discussion set forth herein, the applicable rejections have been overcome. Accordingly, the present and amended claims should be found to be in condition for allowance.

If a telephone interview would expedite the prosecution of this application, the Examiner is invited to contact Judith Szepesi at (408) 720-8300.

If there are any additional charges/credits, please charge/credit our deposit account no. 02-2666.

Respectfully submitted,
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